

Remarks

Thank you for your work in connection with this application and for withdrawing the previous grounds of rejection. The Office Action has been reviewed with care. Following are Applicant's remarks responsive to the Office Action.

The claims are amended as noted. Text additions are underlined and text deletions are indicated by strike out marks. Claims 9 and 25 are amended as noted. Support for the amendments is found, for example, in the Application at page 6, lines 1-12 and page 8, lines 6-17. Claims 12, 13, and 26 are canceled without prejudice or disclaimer. The dependency of claim 14 is adjusted due to cancellation of claim 13.

Response to Rejections - Rejections under 35 U.S.C. § 103(a)

Claim 9-28 stand rejected under 35 U.S.C. § 103(a). Each rejection relies on the combination of U.S. Patent Nos. 4,525,965 (Woelfel), 6,228,463 (Chen), and German patent DE 2426521 A1. The secondary references are cited with respect to aspects of the dependent claims and do not support any claim rejections in and of themselves. Because the combination of Woelfel, Chen, and the German patent does not teach or suggest the tile-product material of claims 9-28, all of the rejections must fall.

To begin with, Applicant respectfully traverses the combination of any of Woelfel, Chen, and the German patent. The reference combination is not appropriate because the references are contrary to each other and to Applicant's claimed subject matter.

The disparate nature of the applied references is underscored by the very different products described in the references. Products are described in these references which have nothing to do with each other or with Applicant's claimed subject matter. Woelfel is a pre-fabricated building panel for attachment to the outer walls of multistoried buildings. Woelfel at col. 1, lines 48-57. The German patent is a coating system which is applied directly to a roadway or factory floor surface and is not a tile material or prefabricated material of any sort. Chen is a floor covering, but is of a very different character than Applicant's claimed material, requiring many more and different layers than Applicant as noted, for example, in the table below.

The following table further illustrates the disparate nature of the applied references. Claim 9 is included to show the lack of any relationship between the products of the references and Applicant's claimed subject matter and the problems solved by Applicant's claimed subject matter.

| Comparison of Claim 9 with Applied References | | | | |
|---|--|---|--|--|
| Layer/Use | Warren Claim 9 | Woelfel | German Patent | Chen |
| Use | A material for use in making tile products. | Prefabricated building panels for application to building exteriors. | Floor surface coating for application to roadways or factory floors. | Floor covering material . |
| Substrate | NONE | Steel support 102 Sheathing 104 Mesh 106 | Floor substructure or foundation. | NONE |
| First layer | A first layer including silica sand particles pre-coated with phenolic resin forming a layer having fused-together particles with pores between the particles. | Concrete 108 | Lean concrete layer. | Backing layer Figs. 8 and 9 layer A, Figs. 10 and 11 "felt" Col. 2, line 40, Col. 10, lines 41-54, Col. 12, lines 22-34 |
| Second layer | A second layer overlying the first layer, said second layer including an aliphatic polymer and a resilient material. | Cushioning material 110 | Epoxy-resin mortar including silica flour and/or silica sand filler. | Foamable layer Fig. 8, layer C, Fig.9, layer C/D Col. 2, line 40, Col. 10, lines 41-54, Col. 12, lines 35-57. |
| Third layer | A third layer overlying the second layer, said third layer including an aliphatic polymer, silica sand and silica flour. | Bonding agent 112 Covers cushioning material 110. Col. 4, lines 15-16. | NONE | Design layer Fig.8, layer B, Col. 10, lines 41-54, Col. 13, lines 34-51 (non-retarder ink compositions) |
| Fourth layer | * * * | Optional facing layer 114 Tile or aggregate set in bonding agent while tacky Col. 5, lines 16-20. | NONE | Wear layer. Col. 10, line 55 through col. 11, line 15. Heated and mechanically embossed to have a surface texture. Col. 13, lines 52-59 (Transparent polyvinyl chloride layer.) |
| Fifth | * * * | NONE | NONE | Top coat of wear-resistant particles, suspension aid, and curable resin. Col. 7, lines 1-6 and col. 11, lines 17-25. |

It is apparent from the materials in the table that Woelfel, Chen, and the German patent do not solve the problems solved by Applicant and actually teach away from their combination and from Applicant's claimed subject matter. According to the post-KSR case of *In re Icon Health and Fitness, Inc.*, "A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Icon Health and Fitness, Inc.*, 496 F.3d 1374, 1381 (Fed. Cir. August 1, 2007). It is not appropriate to reject a claim as obvious if the prior art teaches away from the claimed subject matter. See, *Takeda Chemical Industries, Ltd. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1359-60 (Fed. Cir. June 28, 2007) (District Court finding that prior art taught away from claimed invention affirmed.).

The Application states that a problem with prior flooring systems is blistering and delamination caused by hydrostatic pressure. Application at page 3, lines 5-9. The Application states that there is a need to provide tiles including a base layer capable of dissipating moisture to greatly reduce hydrostatic pressure. Application at page 3, lines 11-13. The Application states that the pores between the particles in the base layer allow moisture to dissipate. Application at page 4, lines 16-17 and page 8, lines 6-13.

Claims 9 and 25 are directed to tile materials which have properties which solve these problems. Claim 9 requires, "a first layer including silica sand particles pre-coated with phenolic resin forming a layer having fused-together particles with pores between the particles." And, claim 25 requires, "a base layer including silica sand particles pre-coated with phenolic resin, said first layer including fused-together particles with interstitial spaces between the particles." Thus, the porosity of the base or first layers, as claimed, is provided to permit dissipation of moisture consistent with the problems addressed and solved in the Application.

The combination of Woelfel, the German patent, and Chen is not appropriate because the references do not solve the problems solved by Applicant's claimed invention and teach away from their combination and from Applicant's claimed subject matter. The concrete base layers of

Woelfel and the German patent teach away from Applicant's base layer because these layers are concrete. (Woelfel concrete at col. 3, lines 5-6 and col. 3, line 46 through col. 4, line 17, Figures 1 and 2 reference no. 108; German patent at page 2). These concretes do not allow moisture dissipation as does Applicant's base layer which includes a first or base layer having fused-together particles with pores between particles.

And, Chen teaches away from Woelfel, the German patent, and Applicant's subject matter because the base layer of Chen (layer A in Figures 8 and 9 and "felt" in Figures 10 and 11) is said to include water-retaining materials such as:

[A] felted or matted fibrous sheet of overlapping intertwined filaments and/or fibers, usually of natural, synthetic, or man-made cellulosic origin, such as cotton or rayon, although many other forms of sheets, films, textile materials, fabrics, or the like, may be used. The substrate or backing layer can be non-foamed, non-crosslinked vinyl compositions as well, for example cellulosic felt, fiber glass scrim, and polyester non-woven sheets. The thickness of a conventional substrate layer is generally not critical and it is preferably from about 2 to about 100 mils, more preferably from about 15 to about 30 mils.

Chen at col. 12, lines 22-34. Use of organic materials or fibrous materials in applications where water or moisture would or could accumulate (like on the surface of a concrete slab) could cause rot and promote growth of mold or other organisms.

Collectively, therefore, Woelfel and the German patent lack moisture dissipation properties while Chen would retain moisture in its base layer. These references are directly contrary to each other and should not be combined. In addition, the reference combination is contrary to Applicant's base layer which enables moisture dissipation through the pores in the base layer by the tile material.

In addition, the combination of Woelfel, the German patent, and Chen fails to teach or suggest all elements of Applicant's claims 9 and 25. As already noted, Woelfel and the German patent have concrete first layers and lack anything like the first or base layer claimed by Applicant. Chen's base layer is unlike the first layer of claim 9 or base layer of claim 25 as discussed.

The cited passage from Chen at col. 6, lines 33-39 refers to Chen's top coat layer which is the uppermost layer furthest from Chen's "backing" layer. The top coat layer is not fairly analogous to Applicant's first or base layer because it is the part of the Chen product which not in contact with the floor or other substrate and there is no need or stated intent for Chen's top coat layer to dissipate water.

Aside from serving a purpose unrelated to Applicant's first or base layer, Chen's top coat layer does not teach or suggest silica sand particles pre-coated with phenolic resin forming a layer having fused-together particles with pores between the particles as required by claim 9. The passage cited from Chen at col. 4, lines 54-55 (and at col. 4, lines 51-61) in connection with now-canceled claims 12 and 26 refers to mixing the wear-resistant particles into a wet coating or scattering the particles on top of a wet coating. The Chen particles are not pre-coated at all. The result of Chen is a continuous top coat layer once the wet coating cures rather than a first layer including silica sand particles pre-coated with phenolic resin forming a layer having fused-together particles with pores between the particles.

In sum, even if the references could be combined (which is not appropriate), the references do not teach or suggest Applicant's material for making tile products because the references fail to teach or suggest Applicant's material with a first layer as in independent claims 9 and 25, and all of the dependent claims. Consequently, Applicant's material is of a character and nature wholly unlike that of the applied references and the rejection should be withdrawn.

It must be noted that U.S. Patent No. 4,791,015 (Becker) as applied to canceled claim 13 is wholly different from claims 9 and 25 and does not render these claims obvious because Becker is wholly different from the claimed subject matter. Becker, which is assigned to the well-known flooring company Armstrong World Industries, is an embossable assembly consisting of a base layer and two resinous layers (preferably film layers) applied over the base layer; the assembly is heated and embossed. Becker at col 4, lines 16-19, col. 6, line 4 through col. 7, line 24.

Becker wholly lacks the second and third layers as claimed in claims 9 and 25. Becker's base layer lacks any pre-coated silica sand particles, instead providing non-pre-coated perlite or other "hollow particles." Becker at col. 5, lines 37-42. The purpose of the hollow particles is to permit vertical compression and crushing with minimal lateral flow during embossing permitting deeper, more clearly defined embossing of the product. Becker at col. 3, lines 39-58 and col. 5, lines 50-52 and 60-61. Silica sand is a different material and does not permit the compression required of Becker's hollow materials. And, the perlite or hollow particles are not pre-coated, but are a "dry blend" in which the resin is a separate component. Becker at col. 4, lines 17-27. A full discussion of Becker's dry blend is at col 4, line 17 through col. 5, line 52.

Claim 10 was rejected based on Woelfel, Chen, and the German patent. Neither Woelfel, Chen, nor the German patent teach pre-coated silica sand particles as claimed. The silica sand particles in Chen are in the uppermost layer of that product and not the first layer as already discussed.

Claims 12, 13 and 26 are canceled without prejudice rendering the rejections moot.

Regarding claim 19, that claim is believed to be allowable at least for the reasons stated in connection with claim 9.

Claim 11 was rejected based on Woelfel, Chen, and the German patent in further view of U.S. Publication No. 2003/0156901 (Britt). Applicant incorporates by reference the arguments distinguishing Woelfel, Chen, and the German patent. Britt should not be combined with the other references because Britt is a pavement marking system; a field unrelated to tile material. Claim 11 requires that the resin is present in an amount of about 3 to 5 percent by weight of the silica sand of the first layer. However, Britt requires 20 to 80 percent of the "nonreinforcing mineral particles" suggesting that Britt has a lesser percentage of particles than in Applicant's first layer. Britt at paragraph 25. Accordingly, the applied combination does not render obvious Applicant's invention as a whole.

Claim 18 was rejected based on Woelfel, Chen, and the German patent in further view of WO 00/50707 (Verret). Applicant again incorporates by reference the arguments distinguishing

Woelfel, Chen, and the German patent. Verret, as best as can be understood from the English-language abstract, is a floor adhesive with 30-90 mesh rubber granules therein. Applicant respectfully submits that an adhesive is not in the field of material for making tile, that an adhesive is unlike a material for making tile, and that Applicant's claim 18 as a whole distinguishes Verret and the other applied references.

Claims 21 and 27 were rejected based on Woelfel, Chen, and the German patent in further view of U.S. Patent No. 3,928,706 (Gibbons). As discussed previously, the combination of Woelfel, Chen, and the German patent does not teach or suggest the subject matter of independent claims 9 and 25. Gibbons does not supply content missing from Woelfel, Chen, and the German patent sufficient to support rejection of independent claims 9 and 25 because Gibbons' decorative laminate is based on joined together plural fibrous sheets. Gibbons at col. 2, lines 1-15. Since the base independent claims 9 and 25 are not obvious in view of these references, it follows that claims 21 and 27 are not obvious.

Claim 22 was rejected based on Woelfel, Chen, and the German patent in further view of U.S. Patent No. 4,504,523 (Miller). Miller is a modification of a conventional embossed vinyl or vinyl asbestos tile. Miller at col. 2, lines 20-25 and col. 4, lines 32-34. A plastic matrix and particles are located exclusively on the raised areas of the tile. A wear layer overlies the particles, matrix and tile. Miller at col. 1, lines 46-63. Miller is not close to the material claimed in independent claim 9 or dependent claim 21 on which claim 22 is based. As in the preceding paragraph, since the combination of Miller and the other applied references does not render claims 9 and 21 obvious, it follows that claim 22 should not be obvious. Reconsideration of the rejection of claim 22 is respectfully requested.

Claims 23, 24, and 28 were rejected based on Woelfel, Chen, and the German patent in further view of U.S. Patent No. 4,525,965 (Severence). Severence is not a material for making tiles or tile products as in independent claims 9 and 25 but, rather, is a floor coating system. Severence is applied to an existing floor surface by a worker in successive layers poured, spread, and/or troweled one-on-top-of the other. Since claims 9 and 25 distinguish the applied references and Severence is no longer applied to reject claims 9 and 25, it stands to reason that claims 23, 24, and 28 should be allowable.

In re Patent Application of:
Christopher Warren
Serial No. 10/823,516

Page 12 of 12

Request for Interview

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue, the Examiner is kindly **requested to call** the undersigned at the telephone number listed below before issuing a further office action so that an interview may be arranged.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 10-0270. Kindly notify the undersigned in the event that the deposit account is debited or credited.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: MAIL STOP AMENDMENT, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450 on October 26, 2007.

John E. Munger
Name


Signature

October 26, 2007
Date